

FUJR 16,621  
09/845,883REMARKS

This amendment is in response to the Examiner's Office Action dated 3/9/2005.

Reconsideration of this application is respectfully requested in view of the foregoing amendment and the remarks that follow.

STATUS OF CLAIMS

Claims 1-5 are pending.

Claims 1, 3 and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Schuster (USP 6,360,271) in view of Maki-Kullas (USP 6,650,621).

Claim 2 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Schuster and Maki-Kullas, as applied to claim 1 above, and further in view of Mawhenney (USP 6,269,082).

Claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Schuster and Maki-Kullas, as applied to claim 1 above, and further in view of Mawhenney.

OVERVIEW OF CLAIMED INVENTION

The presently claimed invention provides for a communication device which controls transmission of packets, wherein the communication device comprises a transmission testing means and a packet transmission means. The transmission testing means performs a packet route evaluation test, wherein the transmission testing means further comprises: a test packet generating means to generate a plurality of test packets, one for each route reaching a given destination node, the plurality of test packets including one reference test packet; a transmission time acquisition means to record reference transmission time at which the reference test packet is transmitted, and measuring transmission times of the other test packets to be transmitted, relative to the reference transmission time; a reception time acquisition means to record reference

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reception time at which the reference test packet is received, and measuring reception times of the other received test packets, relative to the reference reception time; and a transport time evaluation means to rank the plurality of routes in the order of relative packet transport times thereof, by evaluating the difference between the relative transmission time and the relative reception time of each test packet. The packet transmission means transmits packets to one of the routes that is selected according to the result of the packet route evaluation test performed by the transmission testing means.

#### REJECTIONS UNDER 35 U.S.C. § 103

Claims 1, 3 and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Schuster (USP 6,360,271) in view of Maki-Kullas (USP 6,650,621). Claim 2 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Schuster and Maki-Kullas, as applied to claim 1 above, and further in view of Mawhenney (USP 6,269,082). Claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Schuster and Maki-Kullas, as applied to claim 1 above, and further in view of Mawhenney. To be properly rejected under 35 U.S.C. § 103(a), each and every element of the claims must be addressed through known prior art or be recognized as an obvious variation thereto. Applicant contends that the combination of the cited references fail to provide many of the limitations of applicant's pending claims.

With respect to independent claim 1, the examiner exclusively relies on the Schuster reference as teaching all limitations except the limitation of "generating a plurality of test packets", which the examiner claims is remedied for in the Maki-Kullas reference. Specifically, the examiner cites column 4, lines 35-52 of the Schuster reference as teaching the generation of a test packet. The examiner further cites column 12, line 43 to column 13, line 21 as teaching the

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limitation of acquiring "a transmission time for the other test packet of the other paths wherein the time of the other packets is relative to the time of the first test packet based on the clock". The examiner uses the same citation to reason that the Schuster reference teaches acquiring "a receiving time for the other test packets of the other paths wherein the time of the other packets is relative to the time of the received first test packet based on the clock." Applicant respectfully disagrees with the examiner's statements.

Specifically, column 4, lines 35-52 of the Schuster reference teaches a method for estimating a round-trip transmission delay. According to the described method, a transmission line element periodically transmits a time-stamped test packet to a remote element and arranges to have the remote element return the packet. According to Schuster, "the line element may then determine a round trip transmission delay for the test packet by comparing the initial time stamp with the time when the packet returns" (see lines 39-41 of Schuster).

Also, in column 12, line 43 to column 13, line 21 of the Schuster reference teaches a delay measurement method using synchronized clocks wherein transmission delay is measured based on "computing the difference between the receiver-time and sender-time for the packet".

Hence, applicant contends that in Schuster's method, each packet is marked with a sender-time based on a first clock signal at the transmitting end and the receiving end recognizes the reception time of each received packet based on second clock signal. Schuster teaches substantial synchronization between clocks using GPS signals and relies on such synchronized clock signals for accurate measurement of packet delays. Applicant, hence, contends that the examiner's citations and the entire Schuster reference deals with using absolute time to put a

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transmission timestamp in a packet at the sending end and recording reception time of a packet at the receiving end.

In stark contrast, according to claim 1 of the present invention, the transmission time of each test packet is measured relative to the reference transmission time at which a reference test packet is transmitted. Similarly, the reception time of each incoming test packet is measured relative to the reception time at which the reception test packet is received.

Hence, applicant contends that, unlike Schuster, the communication device of claim 1 does not deal with the absolute delays of packets, but deals with relative delays of test packets with respect to the delay of a reference test packet.

Hence, applicant respectfully assert that the Schuster reference fails to teach or suggest the limitation of "a transmission time acquisition means" to record reference transmission time at which the reference test packet is transmitted, and to measure transmission times of the other test packets to be transmitted, relative to the reference transmission time – a limitation of pending independent claim 1. Applicant also respectfully submits that the Shuster reference fails to teach or suggest a reception time acquisition means to record reference reception time at which the reference test packet is received, and to measure reception times of the other received test packets, relative to the reference reception time – another limitation of pending independent claim 1. Furthermore, applicant respectfully asserts that the Schuster reference fails to teach or suggest the limitation of a transport time evaluation means to rank the plurality of routes in the order of relative packet transport times thereof, by evaluating the difference between the relative

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transmission time and the relative reception time of each test packet – yet another limitation of pending independent claim 1.

Applicant also wishes to note that the limitations of a transmission time acquisition means, a reception time acquisition means, a transport time evaluation means are neither taught nor suggested by the Maki-Kullas reference. Applicant respectfully contends that the combination of the Schuster and Maki-Kullas references fail to provide many of the limitations of applicant's pending independent claim 1.

Further, the above-mentioned arguments for independent claim 1 substantially apply to dependent claims 2-5 as they inherit all the limitations of the claim from which they depend. Therefore, applicant respectfully requests the examiner to withdraw the rejections with respect to pending claims 1-5.

#### SUMMARY

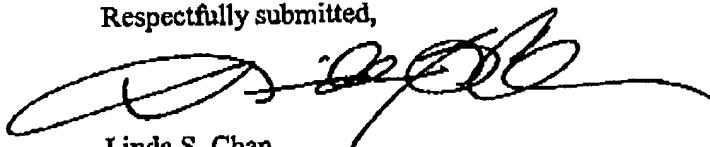
As has been detailed above, none of the references, cited or applied, provide for the specific claimed details of applicant's presently claimed invention, nor renders them obvious. It is believed that this case is in condition for allowance and reconsideration therof and early issuance is respectfully requested.

This amendment is being filed with a petition for extension of time. The Commissioner is hereby authorized to charge the petition fee, as well as any deficiencies in the fees provided to Deposit Account No. 50-1290.

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If it is felt that an interview would expedite prosecution of this application, please do not hesitate to contact applicant's representative at the below number.

Respectfully submitted,



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In the Drawings:

None

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